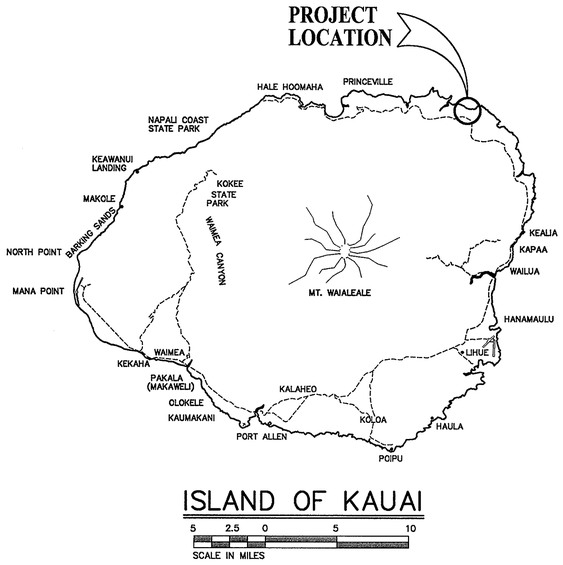

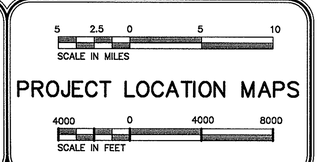

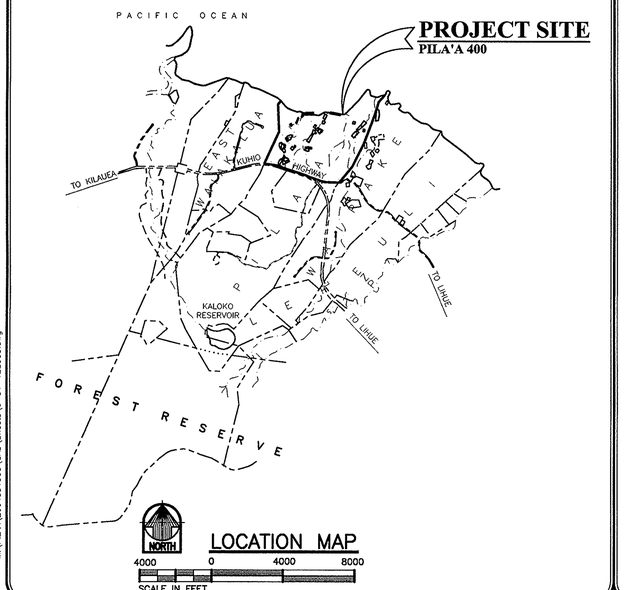

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HALF SIZE TRIM LINE FOR 11"x17"

CONSTRUCTION PLANS FOR:

PILA'A 400

REMEDIATION PLANS - PACKAGE 2

LOCATED AT:

PILA'A, KAUA'I, HAWAI'I

TAX MAP KEY 5-1-04:8

LATEST REVISION:
DATE:

PREPARED FOR:

PILA'A 400, LLC
1450 South Beretania Street
Honolulu, Hawai'i 96814

PREPARED BY:

BELT COLLINS
H A W A I I
2153 North King Street, Suite 200
Phone: (808)521-5361 Fax: (808)538-7819
ENGINEERING • PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL CONSULTING

INDEX OF DRAWINGS:

APPROVED BY:

PLANNING DIRECTOR, PLANNING DEPARTMENT, COUNTY OF KAUAI	DATE
COUNTY ENGINEER, DEPARTMENT OF PUBLIC WORKS COUNTY OF KAUAI	DATE
DEPARTMENT OF LAND & NATURAL RESOURCES STATE OF HAWAII	DATE

COUNTY PERMIT VERSION: DECEMBER 20, 2005
CONSENT DECREE VERSION: DECEMBER 16, 2005
REV DATE: NOVEMBER 10, 2005
REV DATE: JULY 20, 2005
REV DATE: APRIL 15, 2005
REV DATE: MARCH 23, 2005
REV DATE: FEBRUARY 04, 2005
REV DATE: JANUARY, 2005
PROJECT NO. (BCH)2004.33.1900 DATE: MARCH, 2004

PROJECT TITLE: PILA'A 400 REMEDIATION PLANS - PACKAGE 2
PROJECT LOCATION: PILA'A, KAUAI, HAWAII
TMK 5-1-04:8

Trim: 22"x36"

SHEET C-1 of 18 Sheets

FILE	POCKET	FOLDER	NO.

GENERAL NOTES:

1. ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE PROTECTED AT ALL TIMES BY THE CONTRACTOR UNLESS SPECIFIED ON THE PLANS TO BE ABANDONED.
2. ALL CONSTRUCTION WORKS SHALL BE DONE IN ACCORDANCE WITH THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, 1994", AS AMENDED, AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI," AS AMENDED.
3. THE CONTRACTOR SHALL SO CONDUCT HIS OPERATIONS AS TO OFFER THE LEAST POSSIBLE OBSTRUCTION AND INCONVENIENCE TO THE PUBLIC AND HE SHALL HAVE UNDER CONSTRUCTION NO GREATER LENGTH OR AMOUNT OF WORK THAT HE CAN PROSECUTE PROPERLY WITH DUE REGARD TO THE RIGHTS OF THE PUBLIC.
4. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER "AS BUILT" DRAWINGS OF ALL NEW IMPROVEMENTS UPON COMPLETION OF WORK.
5. ENVIRONMENTAL POLLUTION CONTROL: CONTRACTOR SHALL KEEP THE PROJECT AND SURROUNDING AREAS FREE FROM DUST NUISANCE. THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH.

   ENVIRONMENTAL POLLUTION CONTROLS SHALL BE DONE AT THE CONTRACTOR'S OWN EXPENSE.
6. OWNER IS PROVIDING A STOCKPILE OF BAGGED HYDROMULCH CARRIER (CONTAINS NO SEED OR FERTILIZER) ON THE PLATEAU BETWEEN GULCHES 2 & 3. THERE ARE APPROXIMATELY 860 BAGS OF SPRAY MATT BONDED FIBER MATRIX IN THE STOCKPILE. EACH BAG CONTAINS 50 LBS OF HYDROMULCH. THESE BAGS SHALL SHALL BE USED FOR THE "STANDARD" HYDROMULCH CARRIER MIXTURE.
7. OWNER IS PROVIDING A STOCKPILE SITE ON THE PLATEAU BETWEEN GULCHES 2 & 3 AND A STOCKPILE SITE NEAR THE SOUTH EAST CORNER OF THE PROPERTY. SEE SHEET C-3.
8. EXISTING WATER SUPPLY PIPES ARE AVAILABLE FOR TEMPORARY IRRIGATION USE.

TEMPORARY DUST AND EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO THAT EXCAVATION, EMBANKMENT AND IMPORTED MATERIAL SHALL BE DAMPENED TO PREVENT DUST PROBLEMS.
2. IN APPLYING FOR A GRADING PERMIT, THE CONTRACTOR SHALL SUBMIT PLANS, SCHEDULES AND/OR WRITTEN MEASURES WHICH PROVIDE FOR DUST CONTROL. THE DUST CONTROL MEASURES SHALL CONTAIN POSITIVE STATEMENTS WHICH REQUIRE ACTION OR WORK THAT PREVENT DUST PROBLEMS, NO PERMITS WILL BE ISSUED UNLESS THE COUNTY IS ASSURED THAT DUST PROBLEMS WILL BE MINIMIZED,
3. TEMPORARY VEGETATIVE COVER SHALL BE PLANTED WITHIN A PERIOD OF 14 CALENDAR DAYS FOR GULCH 2 & GULCH 3 AFTER THE SITE HAS BEEN GRADED OR IF FINAL GRADING OF THE SITE WILL BE SUSPENDED FOR MORE THAN 14 CALENDAR DAYS.
4. TEMPORARY VEGETATIVE COVER SHALL CONSIST OF A GRASS SEED MIXTURE APPLIED WITH A HYDROMULCH CARRIER. GRASS SEED MIXTURE SHALL BE OF ANNUAL RYEGRASS AND COMMON BERMUDA IN THE FOLLOWING AMOUNTS:
   A. ANNUAL RYEGRASS 3 LBS PER 1000 SF
   B. COMMON BERMUDA 4 LBS PER 1000 SF

   ON ALL AREAS TO RECEIVE TEMPORARY VEGETATIVE COVER, PRIOR TO HYDROMULCHING, APPLY A 1" LAYER OF ORGANIC COMPOST AND FERTILIZER OVER ENTIRE PLANTING AREA AND TILLED 4" DEEP INTO SOIL. FERTILIZER SHALL BE APPLIED AT A RATE OF 1 LB. OF NITROGEN PER 1,000 SQ.FT. A TEMPORARY IRRIGATION SYSTEM IS TO BE INSTALLED CONCURRENTLY WITH ALL PLANTING OPERATIONS. PLANTING AND MAINTENANCE SHALL CONFORM TO THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, 1994", AS AMENDED, AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI," AS AMENDED.
5. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL PROVIDE EFFECTIVE MEASURES FOR THE CONTROL OF FUGITIVE DUST EMISSIONS FROM THE PROJECT AND SURROUNDING AREAS CAUSED BY HIS OPERATIONS. THESE MEASURES SHALL MEET THE REQUIREMENTS OF STATE ADMINISTRATIVE RULES, DEPARTMENT OF HEALTH, AIR POLLUTION CONTROL (11-60).
6. THE HYDROMULCH CARRIER/BASE SHALL BE SPRAYMATT BONDED FIBER MATRIX, OR APPROVED EQUIVALENT. SPRAYMATT BONDED FIBER MATRIX CONTAINS 70% GREEN COLORED RECYCLED PAPER FIBER, 12% (+/- 3%) WATER, WITH TACKIFIER FILLING THE REMAINING PERCENTAGE. MIX WITH ADDITIONAL WATER, SEED MIX, AND FERTILIZER PRIOR TO SPRAY APPLICATION. FOR SLOPES LESS THAN OR EQUAL TO 2 HORIZONTAL TO 1 VERTICAL, NO OTHER TACKIFIER ADDITIVES ARE REQUIRED TO BE ADDED TO THE SPRAYMATT BONDED FIBER MATRIX CARRIER/BASE.
7. THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL STRUCTURES UNTIL STABILIZATION HAS OCCURRED (EXCEPT WHERE STRUCTURES ARE SCHEDULED FOR REMOVAL). BEFORE FINAL PROJECT ACCEPTANCE, THE CONTRACTOR SHALL REPAIR EROSION CONTROL STRUCTURES THAT ARE TO REMAIN AFTER STABILIZATION TO THEIR ORIGINAL CONDITIONS.
8. IF RAINFALL IS ANTICIPATED, THE CONTRACTOR SHALL STOP GRADING WORK AND TEMPORARILY COVER ALL GRADED AREAS WITH EROSION CONTROL FABRIC (NORTH AMERICAN GREEN C125 OR APPROVED EQUAL). EROSION CONTROL FABRIC MAY BE RE-STOCKPILED AND REUSED IF IN GOOD CONDITION. OTHER EROSION CONTROL SUPPLIES (SUCH AS FIBER ROLL WATTLES, ROCK/GRAVEL, NON-WOVEN GEOTEXTILE FOR ROCK BERMS) SHOULD ALSO BE CLOSE AT HAND TO PREPARE FOR RAINFALL, AND USED AS NEEDED. TEMPORARY EROSION CONTROL FABRIC SHALL BE FASTENED WITH A MINIMUM OF 25 PERCENT OF THE NUMBER OF FASTENERS RECOMMENDED BY THE MANUFACTURER.

GRADING NOTES:

1. THE CONTRACTOR SHALL REMOVE ALL SILT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES, ROADWAYS AND OTHER AREAS. THE COST INCURRED FOR ANY NECESSARY REMEDIAL ACTION SHALL BE AT NO ADDITIONAL COST TO THE COUNTY OF KAUAI.
2. ANY REMAINING SEDIMENT AND DEBRIS IN WATERWAYS AND DRAINAGE FACILITIES SHALL BE REMOVED UPON COMPLETION OF GRADING OPERATIONS.
3. THE CONTRACTOR AT HIS OWN EXPENSE SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DUST NUISANCE, THE WORK SHALL BE IN CONFORMANCE WITH THE AIR POLLUTION CONTROL STANDARDS AND REGULATIONS OF THE STATE DEPARTMENT OF HEALTH AND THE GRADING ORDINANCE OF THE COUNTY OF KAUAI.
4. ALL GRADING WORK SHALL BE DONE IN ACCORDANCE WITH THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, 1994" AS AMENDED, "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1986, OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI," AS AMENDED.
5. WHERE EXISTING GROUND IS STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL (5:1), KEYING IS REQUIRED TO PROPERLY BOND THE NEW FILL TO THE SLOPE. SEE DETAIL SHEET C-12.
6. NO GRADING WORK SHALL BE DONE ON SATURDAYS, SUNDAYS AND HOLIDAYS AT ANYTIME WITHOUT PRIOR NOTICE TO THE OWNER'S REPRESENTATIVE AND A WRITTEN PERMISSION FROM THE COUNTY ENGINEER.
7. THE LIMITS OF THE GRADED AREA SHALL BE FLAGGED BEFORE THE COMMENCEMENT OF THE GRADING WORK.
8. ALL GRADING GRUBBING AND STOCKPILING WORK SHALL BE DONE IN ACCORDANCE WITH THE COUNTY OF KAUAI ORDINANCE NO. 808 AND THE CONTRACT SPECIFICATIONS.
9. IN ACCORDANCE WITH CHAPTER 11-60.1, AIR POLLUTION CONTROL, TITLE 11, HAWAII ADMINISTRATIVE RULES OF THE STATE DEPARTMENT OF HEALTH, BURNING OF GRUBBED MATERIAL ON THE PROJECT SITE SHALL NOT BE PERMITTED. GRUBBED MATERIAL SHALL BE DISPOSED OF OFF-SITE.
10. ISSUANCE OF A GRADING GRUBBING OR STOCKPILING PERMIT SHALL BE DEEMED TO INCLUDE THE RIGHT OF THE COUNTY ENGINEER OR HIS REPRESENTATIVE TO ENTER UPON THE PROPERTY TO INSPECT OPERATIONS.
11. HOURS OF OPERATION – 7:00 A.M. TO 7:00 P.M. DAILY EXCEPT SATURDAYS, SUNDAYS AND HOLIDAYS RECOGNIZED BY THE COUNTY OF KAUAI, UNLESS AUTHORIZED IN WRITING BY THE COUNTY ENGINEER.
12. ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE APPLICABLE PROVISIONS OF THE GRADING ORDINANCE TO PREVENT VIOLATION OF THE HAWAII ADMINISTRATIVE RULES. DEPARTMENT OF HEALTH, WATER POLLUTION CONTROL AND WATER QUALITY STANDARDS (CHAPTERS 11-54 AND 11-55) DUE TO EROSION AND RUNOFF TO STATE WATERS.
13. GRUBBED MATERIAL, DEMOLITION WASTES AND CONSTRUCTION WASTES SHALL BE DISPOSED OF IN ACCORDANCE TO THE REQUIREMENTS OF THE STATE DEPARTMENT OF HEALTH OF KAUAI AND AT AN AUTHORIZED SITE HAVING A DEPARTMENT OF HEALTH SOLID WASTES MANAGEMENT PERMIT. OPEN BURNING IS PROHIBITED. THE CONTRACTOR SHALL INFORM THE COUNTY ENGINEER OF THE LOCATION OF DISPOSAL SITES. THE DISPOSAL SITE SHALL COMPLY WITH GRADING ORDINANCE NO. 808.
14. EARTHWORK QUANTITIES ARE:

	EXCAVATION	EMBANKMENT	GRADED AREA
GULCH 2	4,320 CY	1,380 CY	1.30 ACS
GULCH 3	3,130 CY	1,000 CY	1.30 ACS
LAKES 1&2	1,200 CY	0	2.20 ACS
TOTAL	8,650 CY	2,380 CY	4.80 ACS

   EARTHWORK QUANTITIES ARE FOR GRADING PERMIT ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING HIS OWN QUANTITIES. EARTH WORK QUANTITIES FOR THE EASTERN PLATEAU (BETWEEN GULCH 1 AND GULCH 2) WILL BE ZERO (EXCAVATION, EMBANKMENT, AND GRADED AREA), BECAUSE CONSERVATION DISTRICT RULES PREVENT GRADING, AND THUS NO GRADING IS PLANNED FOR THE EASTERN PLATEAU.
15. THE COUNTY SHALL BE INFORMED OF THE LOCATION OF THE DISPOSAL SITE FOR THE EXCESS MATERIAL FROM THIS PROJECT WHEN THE APPLICATION FOR A GRADING PERMIT IS MADE. THE DISPOSAL SITE SHALL COMPLY WITH GRADING ORDINANCE NO. 808.
16. ELEVATION DATUM FOR THESE CONSTRUCTION PLANS IS BASED ON MEAN SEA LEVEL.

ENVIRONMENTAL PROTECTION NOTES:

1. IN ACCORDANCE WITH CHAPTER 11-60.1, AIR POLLUTION CONTROL, TITLE 11, HAWAII ADMINISTRATIVE RULES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT EFFECTIVE CONTROL MEASURES ARE PROVIDED TO MINIMIZE OR PREVENT ANY VISIBLE DUST EMISSION CAUSED BY THE CONSTRUCTION WORK FROM IMPACTING THE SURROUNDING AREAS INCLUDING THE OFF-SITE ROADWAYS USED TO ENTER/EXIT THE PROJECT, THESE MEASURES INCLUDE BUT ARE NOT LIMITED TO THE USE OF WATER WAGONS, SPRINKLER SYSTEMS, DUST FENCES, ETC.
2. IN ACCORDANCE WITH CHAPTER 11-55, WATER POLLUTION CONTROL AND CHAPTER 11-54, WATER QUALITY STANDARDS, TITLE 11, HAWAII ADMINISTRATIVE RULES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE BEST MANAGEMENT PRACTICE (BMP) TO MINIMIZE OR PREVENT THE DISCHARGE OF SEDIMENTS, DEBRIS. AND OTHER WATER POLLUTANT INTO STATE WATERS IS PROVIDED.
3. IN ACCORDANCE WITH CHAPTER 11-58, SOLID WASTE MANAGEMENT CONTROL, TITLE 11, STATE ADMINISTRATIVE RULES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT GRUB MATERIAL, DEMOLITION WASTE AND CONSTRUCTION WASTE GENERATED BY THE PROJECT ARE DISPOSED OF IN A MANNER OR AT A SITE APPROVED BY THE STATE DEPARTMENT OF HEALTH. DISPOSAL OF ANY OF THESE WASTES BY BURNING IS PROHIBITED.
4. WORK SHALL BE DONE IN CONFORMATNCE WITH THE COMMUNITY NOISE STANDARDS CONTAINED IN THE HAWAII ADMINISTRATIVE RULES, TITLE 11, CHAPTER 46, "COMMUNITY NOISE CONTROL".

EROSION CONTROL AND BEST MANAGEMENT PRACTICE NOTES:

1. CLEARING, GRUBBING AND GRADING SHALL BE HELD TO THE MINIMUM NECESSARY. GRADING AND GRUBBING SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF CLEARED SURFACE AREA. DISTURBED AREA SHALL NOT EXCEED 10 ACRES AT ANY ONE TIME.
2. INSTALL ALL EROSION CONTROL STRUCTURES WHERE INDICATED ON THESE PLANS.
3. CONSTRUCTION ENTRANCES AND ROADWAYS SHALL BE COVERED WITH COMPACTED 1 1/2" ROCK.
4. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE AND FUNCTIONAL BEFORE GRADING AND GRUBBING OPERATIONS BEGIN. THESE MEASURES SHALL BE PROPERLY CONSTRUCTED AND MAINTAINED THROUGHOUT THE GRADING AND GRUBBING PERIOD.
5. ALL CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS NECESSARY, FOR EXAMPLE, WEEKLY IN DRY PERIODS AND WITHIN TWENTY-FOUR HOURS AFTER ANY RAINFALL OF 0.5 INCHES OR GREATER WITHIN A 24-HOUR PERIOD. DURING PROLONGED RAINFALL, DAILY CHECKING IS NECESSARY. THE PERMITTEE SHALL MAINTAIN RECORDS OF CHECKS AND REPAIRS.
6. IF HEAVY RAINS ARE PROJECTED DURING A WORKDAY:
   (1) ALL CONTROL STRUCTURES THAT ARE A PART OF THIS PROJECT WILL BE INSPECTED IMMEDIATELY AND REINFORCED AS NECESSARY; AND
   (2) REMOVE ALL MATERIAL, EQUIPMENT, AND LOOSE SOIL AS PRACTICAL FROM FLOODWAYS.
7. ALL EROSION CONTROL STRUCTURES THAT ARE A PART OF THIS PROJECT WILL REMAIN IN PLACE UNTIL VEGETATION IS ESTABLISHED. BEFORE FINAL ACCEPTANCE, ALL TEMPORARY STRUCTURES SHALL BE REMOVED AND REVEGETATED.
8. FERTILIZER AND PESTICIDE APPLICATION SHALL NOT OCCUR IF HEAVY RAINS ARE ANTICIPATED DURING THE WORKDAY, OR DURING HEAVY RAINS.
9. THE OWNER SHALL MAINTAIN RECORDS OF THE DURATION AND ESTIMATED VOLUME OF STORM WATER DISCHARGE(S) AND RECORDS OF HOURLY ON-SITE RAINFALL.
10. A SPECIFIC INDIVIDUAL APPOINTED BY THE OWNER SHALL BE DESIGNATED TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON THIS PROJECT.
11. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED FOR STORAGE OF HAZARDOUS CHEMICALS, SUCH AS PESTICIDES AND FERTILIZER, TO PREVENT SPILLAGE FROM OCCURRING AND FLOWING INTO WATERCOURSES. ALL SPILLS SHALL BE STOPPED AND CLEANED UP WITH PROPER ABSORBENT MATERIAL. ABSORBENT MATERIAL SPILL KITS SHALL BE MAINTAINED ON-SITE.
12. SANITARY AND SEPTIC WASTES SHALL BE COLLECTED FROM ON-SITE FACILITIES ON A REGULAR BASIS BY A LICENSED HAULER. SANITARY AND SEPTIC FACILITIES SHALL NOT BE LOCATED NEAR WATERCOURSES.
13. VEHICLE AND EQUIPMENT MAINTENANCE AND FUELING SHALL BE DONE OFF OF THE PROPERTY.
14. DUST CONTROL WITH WATER SPRAY (BY TRUCK OR TEMPORARY SPRINKLERS) SHALL BE INSTALLED AS NEEDED. DO NOT OVERWATER.
15. CONTRACTORS AND SUBCONTRACTORS SHALL BE TRAINED ON THE BEST MANAGEMENT PRACTICES.
16. FABRIC ON ALL EROSION CONTROL STRUCTURES SHALL BE CLEARED OF SILT WITHIN 24 HOURS FOLLOWING THE END OF ANY RAINFALL THAT CAUSES SILT BUILDUP ON THE FABRIC.
17. STABILIZATION SHALL BE ACCOMPLISHED BY TEMPORARY OR PERMANENTLY PROTECTING THE DISTURBED SOIL SURFACE FROM RAINFALL IMPACTS AND RUNOFF WITH PLANTING. TEMPORARY IRRIGATION SHALL BE INSTALLED TO FACILITATE GROWTH OF STABILIZATION. DO NOT OVERWATER.
18. CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL STRUCTURES AS NEEDED WHERE CONTRACTOR TRAVELS OR WORKS BEYOND THE GRADING LIMITS INDICATED ON THE PLANS. CONTRACTOR SHALL SEEK GUIDANCE FROM THE ENGINEER FOR TYPE AND LOCATION OF STRUCTURES.
19. AT THE END OF EACH WORK DAY, REMOVE ALL MATERIAL, EQUIPMENT, AND LOOSE SOIL FROM FLOODWAYS. NO CONSTRUCTION MATERIAL OR CONSTRUCTION-RELATED MATERIALS SHALL BE STOCKPILED, STORED OR PLACED IN STATE WATERS OR IN WAYS THAT WILL DISTURB OR ADVERSELY IMPACT THE AQUATIC ENVIRONMENT.
20. ON-SITE RAINFALL AMOUNTS SHALL BE RECORDED AND SAVED DURING THE CONSTRUCTION PERIOD FOR LATER REVIEW.

SOIL STOCKPILE NOTES:

1. ALL WORK ON THE STOCKPILE SHALL CONFORM TO THE EROSION CONTROL AND BEST MANAGEMENT PRACTICE NOTES LISTED ON THIS SHEET.
2. A SILT FENCE (REFER TO DETAIL ON SHEET C-5) WITH A CONTINUOUS COIR (COCONUT FIBER) WATTLE SHALL BE PLACED AROUND THE DOWN STREAM END OF THE STOCKPILE. THIS SILT FENCE WITH COIR WATTLE SHALL BE REPAIRED AND CLEANED AFTER EVERY SIGNIFICANT RAINFALL EVENT.
3. STOCKPILE SHALL BE STABILIZED AT THE END OF EACH WORKDAY. STABILIZATION IS DEFINED AS SOME TYPE OF COVERING OVER THE STOCKPILE, SUCH AS TARPAULIN OR HYDROMULCH.
4. STOCKPILE LOCATIONS ARE INDICATED ON SHEET C-3.
5. STOCKPILE QUANTITIES ARE:

EXCAVATION	VOLUME	AREA
EXISTING STOCKPILE	3,000 CY	0.50 ACS
NEW STOCKPILE NEAR WESTERN PLATEAU	3,000 CY	0.50 ACS

   STOCKPILE QUANTITIES ARE FOR GRADING/STOCKPILE PERMIT ONLY.
6. UPON COMPLETION OF THE PROJECT, THE EXCESS MATERIAL AT THE STOCKPILE SHALL BE REMOVED AND THE STOCKPILE SITE SHALL BE GRADED AND REPLANTED WITH GRASS.
7. A DESIGNATED AGENT OF THE OWNER SHALL BE IN CHARGE OF SUPERVISION OF THE STOCKPILE OPERATION.
8. ALL TEMPORARY STOCKPILES (EXCESS NOT TAKEN TO AND PLACED IN THE DESIGNATED MASTER STOCKPILE LOCATION INDICATED ON SHEET C-3) SHALL ALSO BE SUBJECT TO THE REQUIREMENTS OF THESE STOCKPILE NOTES.SEE NOTE 9.
9. TEMPORARY STOCKPILES WILL NOT BE ALLOWED FOR OVERNIGHT STORAGE – TEMPORARY STOCKPILES MUST BE REMOVED AT THE END OF EACH DAYS WORK.
10. AT THE END OF THE PROJECT CONSTRUCTION, REMOVE FROM THE PROPERTY SOIL AND ROCK FROM STOCKPILE AREAS, LEVEL THE GRADE OF THESE AREAS, AND RE-GRASS THESE AREAS WITH HYDROMULCH GRASS MIXTURE.

PERMANENT EROSION CONTROL MEASURES:

1. THE CONTRACTOR SHALL GRASS ALL EXPOSED AREAS WITHIN THE AREAS OF CONSTRUCTION WORK. SEE PARAGRAPH #3-TEMPORARY DUST AND EROSION CONTROL NOTES.
2. IN AREAS NOT COVERED BY THE LANDSCAPING PLANS, THE CONTRACTOR SHALL GRASS THESE AREAS WITH A GRASS MIXTURE APPLIED WITH A HYDROMULCH CARRIER. GRASS SEED MIXTURE SHALL BE OF ANNUAL RYEGRASS AND COMMON BERMUDA IN THE FOLLOWING AMOUNTS:
   A. ANNUAL RYEGRASS 3 LBS PER 1000 SF
   B. COMMON BERMUDA 4 LBS PER 1000 SF

   ON ALL AREAS WHERE GRASS IS TO BE GROWN (AS INDICATED ON THE LANDSCAPING PLANS) AND ON ALL AREAS NOT COVERED BY THE LANDSCAPING PLANS, PRIOR TO HYDROMULCHING, APPLY A 1" LAYER OF ORGANIC COMPOST AND FERTILIZER OVER ENTIRE PLANTING AREA AND TILLED 4" DEEP INTO SOIL. FERTILIZER SHALL BE APPLIED AT A RATE OF 1 LB. OF NITROGEN PE 1,000 SQ. FT. A TEMPORARY IRRIGATION SYSTEM IS TO BE INSTALLED CONCURRENTLY WITH ALL PLANTING OPERATIONS. THE TEMPORARY IRRIGATION SYSTEM SHALL REMAIN UNTIL ALL CONSTRUCTION IS COMPLETED AND TEMPORARY EROSION CONTROL STRUCTURES ARE REMOVED. EROSION CONTROL MATTING SHALL BE UTILIZED WHERE INDICATED ON THE PLANS. PLANTING AND MAINTENANCE SHALL CONFORM TO THE "HAWAII STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND PUBLIC WORKS CONSTRUCTION, 1994", AS AMENDED, AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION, SEPTEMBER 1984, OF THE DEPARTMENT OF PUBLIC WORKS, COUNTY OF KAUAI," AS AMENDED.
3. FOR AREAS STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL WHERE HYDROMULCH IS TO BE APPLIED, HYDROMULCH CARRIER SHALL ALSO CONTAIN "AIRTROL SS" ADDITIVE, WITH THE "AIRTROL SS" ADDED TO THE HYDROMULCH CARRIER AT A RATE OF 6,000 LBS PER ACRE. SEED MIXTURE AND FERTILIZER APPLICATION RATE SHALL BE THE SAME AS IN NOTE 2 OF THIS SECTION. NO TILLING OR APPLICATION OF ORGANIC COMPOST SHALL BE PERFORMED ON SLOPES STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL.
4. FOR AREAS WITH SLOPES OF 2 HORIZONTAL TO 1 VERTICAL OR FLATTER, APPLY HYDROMULCH AS INDICATED IN NOTE 2 OF THIS SECTION.
5. REFER TO SHEET L-5 FOR REVEGETATION PROCESS. REFERENCE IN THE NOTES FOR THE REVEGETATION PROCESS IN REGARDS TO "GYPSUM BASED LAND PLASTER/GEOBINDER, ORGANIC STARCH BASED TACKIFIER AND WOOD FIBER MULCH" SHALL REFER TO HYDROMULCH CARRIER.
6. THE HYDROMULCH CARRIER/BASE SHALL BE SPRAYMATT BONDED FIBER MATRIX, OR APPROVED EQUIVALENT. SPRAYMATT BONDED FIBER MATRIX CONTAINS AT LEASE 70% GREEN COLORED RECYCLED PAPER FIBER, 12% (+/- 3%) WATER, WITH TACKIFIER FILLING THE REMAINING PERCENTAGE. MIX WITH ADDITIONAL WATER, SEED MIX, AND FERTILIZER PRIOR TO SPRAY APPLICATION. FOR SLOPES LESS THAN OR EQUAL TO 2 HORIZONTAL TO 1 VERTICAL, NO OTHER TACKIFIER ADDITIVES ARE REQUIRED TO BE ADDED TO THE SPRAYMATT BONDED FIBER MATRIX CARRIER/BASE.

Rev	Date	Description	Eng	App
△		COUNTY PERMIT VERSION: DECEMBER 20, 2005		
△		CONSENT DECREE VERSION: DECEMBER 16, 2005		
△		REV. DECEMBER 16, 2005		
△		REV. APRIL 15, 2005		
△		REV. MARCH 23, 2005		
△		REV. FEBRUARY 04, 2005		

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.

APRIL 30, 2006
EXPIRATION DATE OF THE LICENSE

LELAND Y.S. LEE
LICENSED PROFESSIONAL ENGINEER
No.4912-C
HAWAII, U.S.A.

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Consultant:

Client:
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PILA'A 400
REMEDIATION PLAN - PACKAGE 2

CONSTRUCTION NOTES

Designed By: C.K.L. Drawn By: C.K.L., G.Y.
Project No. 2004.33.1900 Date: MARCH, 2004

Approved By:

Date

Date

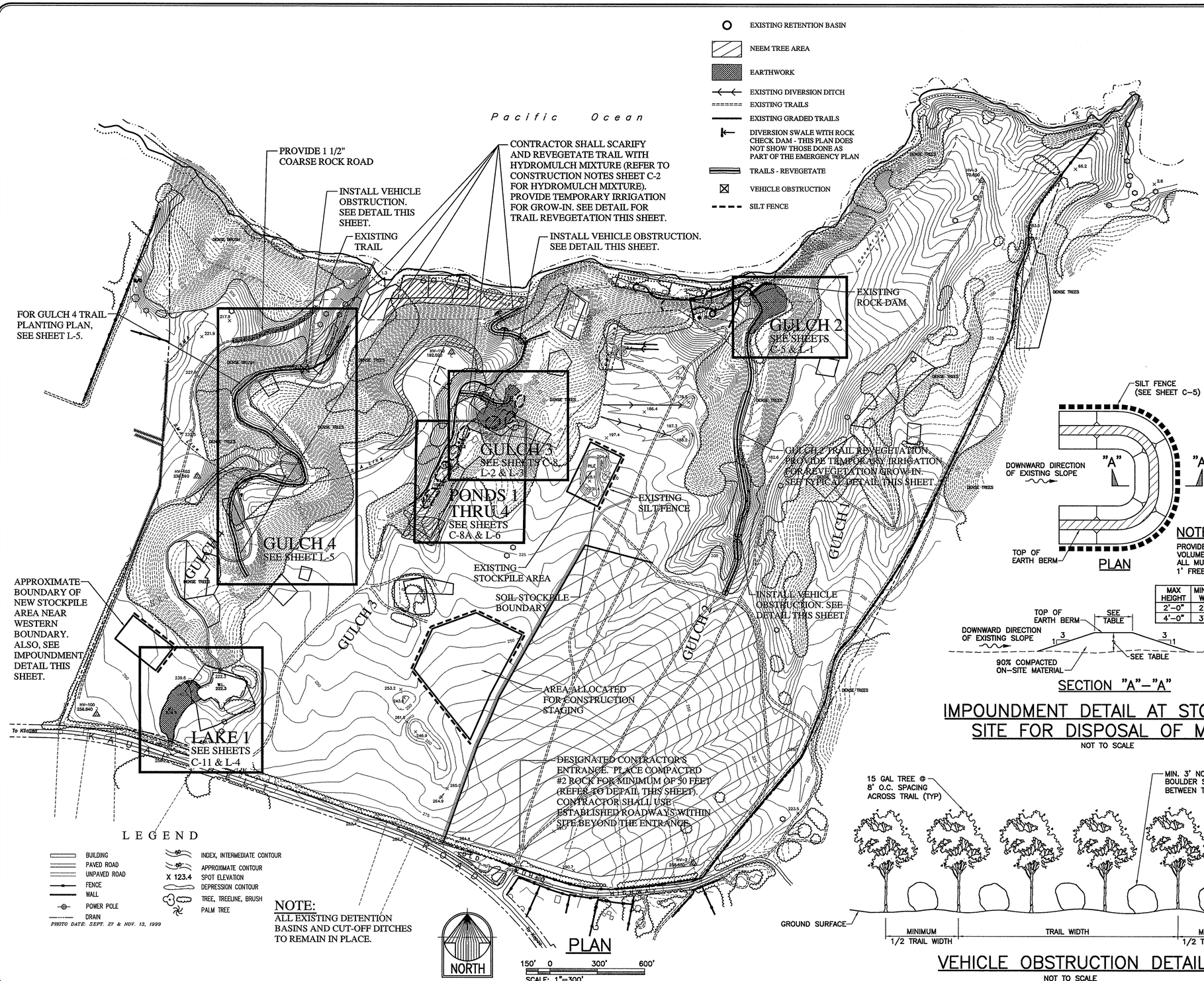
Date

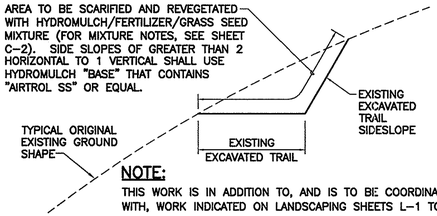
FILE	POCKET	FOLDER	NO.

Tue., 20 Dec 2005 - 3:35pm
M:\PILA'A\2004.33.1900\CAD\Sheets\C-02-122005.dwg

HALF SIZE TRIM LINE FOR 11"x17"

Trim: 22"x36"

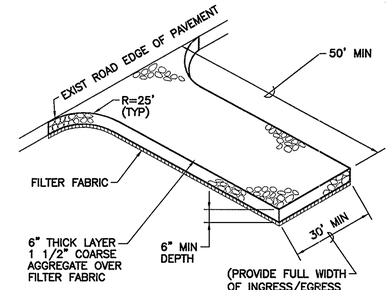




NOTE:
THIS WORK IS IN ADDITION TO, AND IS TO BE COORDINATED WITH, WORK INDICATED ON LANDSCAPING SHEETS L-1 TO L-6.

GULCHES 2, 3 & 4 TRAIL REVEGETATION TYPICAL SECTION

NOT TO SCALE



STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT TO SCALE

PLAN

NOTE:
PROVIDE SUFFICIENT VOLUME TO CONTAIN ALL MUCK WITH MIN 1' FREEBOARD.

MAX HEIGHT	MIN TOP WIDTH
2'-0"	2'-0"
4'-0"	3'-0"

SECTION "A"–"A"

IMPOUNDMENT DETAIL AT STOCKPILE SITE FOR DISPOSAL OF MUCK

NOT TO SCALE

VEHICLE OBSTRUCTION DETAIL

NOT TO SCALE

Rev	Date	Description	Eng	App
		CONSENT DECREE VERSION: DECEMBER 16, 2005		
		REV. APRIL 15, 2005		
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PILA'A 400
REMEDIATION PLAN - PACKAGE 2

GENERAL SITE PLAN AND KEY MAP

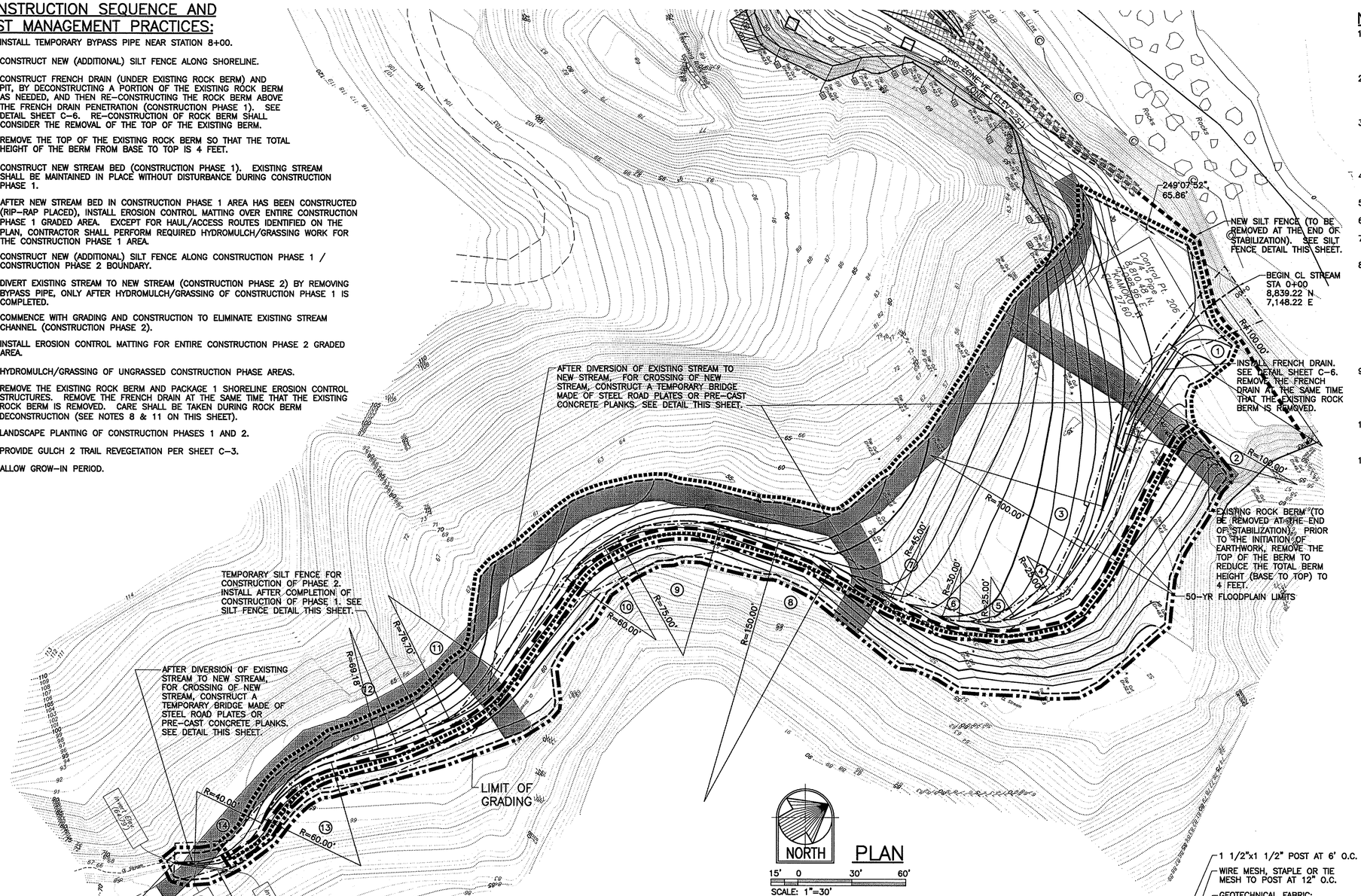
Designed By: C.K.L. Drawn By: C.K.L., G.Y.
Project No. 2004.33.1900 Date: MARCH, 2004
Approved By:

Date
Date
Date

FILE	POCKET	FOLDER	NO.

CONSTRUCTION SEQUENCE AND BEST MANAGEMENT PRACTICES:

1. INSTALL TEMPORARY BYPASS PIPE NEAR STATION 8+00.
2. CONSTRUCT NEW (ADDITIONAL) SILT FENCE ALONG SHORELINE.
3. CONSTRUCT FRENCH DRAIN (UNDER EXISTING ROCK BERM) AND PIT, BY DECONSTRUCTING A PORTION OF THE EXISTING ROCK BERM AS NEEDED, AND THEN RE-CONSTRUCTING THE ROCK BERM ABOVE THE FRENCH DRAIN PENETRATION (CONSTRUCTION PHASE 1). SEE DETAIL SHEET C-6. RE-CONSTRUCTION OF ROCK BERM SHALL CONSIDER THE REMOVAL OF THE TOP OF THE EXISTING BERM.
4. REMOVE THE TOP OF THE EXISTING ROCK BERM SO THAT THE TOTAL HEIGHT OF THE BERM FROM BASE TO TOP IS 4 FEET.
5. CONSTRUCT NEW STREAM BED (CONSTRUCTION PHASE 1). EXISTING STREAM SHALL BE MAINTAINED IN PLACE WITHOUT DISTURBANCE DURING CONSTRUCTION PHASE 1.
6. AFTER NEW STREAM BED IN CONSTRUCTION PHASE 1 AREA HAS BEEN CONSTRUCTED (RIP-RAP PLACED), INSTALL EROSION CONTROL MATTING OVER ENTIRE CONSTRUCTION PHASE 1 GRADED AREA. EXCEPT FOR HAUL/ACCESS ROUTES IDENTIFIED ON THE PLAN, CONTRACTOR SHALL PERFORM REQUIRED HYDROMULCH/GRASSING WORK FOR THE CONSTRUCTION PHASE 1 AREA.
7. CONSTRUCT NEW (ADDITIONAL) SILT FENCE ALONG CONSTRUCTION PHASE 1 / CONSTRUCTION PHASE 2 BOUNDARY.
8. DIVERT EXISTING STREAM TO NEW STREAM (CONSTRUCTION PHASE 2) BY REMOVING BYPASS PIPE, ONLY AFTER HYDROMULCH/GRASSING OF CONSTRUCTION PHASE 1 IS COMPLETED.
9. COMMENCE WITH GRADING AND CONSTRUCTION TO ELIMINATE EXISTING STREAM CHANNEL (CONSTRUCTION PHASE 2).
10. INSTALL EROSION CONTROL MATTING FOR ENTIRE CONSTRUCTION PHASE 2 GRADED AREA.
11. HYDROMULCH/GRASSING OF UNGRASSED CONSTRUCTION PHASE AREAS.
12. REMOVE THE EXISTING ROCK BERM AND PACKAGE 1 SHORELINE EROSION CONTROL STRUCTURES. REMOVE THE FRENCH DRAIN AT THE SAME TIME THAT THE EXISTING ROCK BERM IS REMOVED. CARE SHALL BE TAKEN DURING ROCK BERM DECONSTRUCTION (SEE NOTES 8 & 11 ON THIS SHEET).
13. LANDSCAPE PLANTING OF CONSTRUCTION PHASES 1 AND 2.
14. PROVIDE GULCH 2 TRAIL REVEGETATION PER SHEET C-3.
15. ALLOW GROW-IN PERIOD.



NORTH

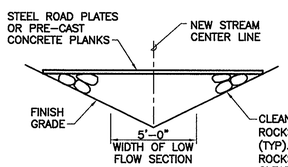
PLAN

15' 0 30' 60'

SCALE: 1"=30'

LEGEND:

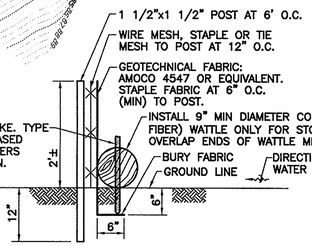
- CONSTRUCTION PHASE 1
- CONSTRUCTION PHASE 2
- 50-YR FLOODPLAIN LIMITS
- LIMIT OF GRADING
- RESTORED STEAM CENTERLINE Q50=286 CFS
- DEDICATED HAUL/ACCESS ROUTES, COVERED WITH EROSION CONTROL FABRIC AFTER CONSTRUCTION OF PHASE 1 AND 2, BUT PRIOR TO LANDSCAPE PLANTING, FOR EXISTING BERM REMOVAL AND LANDSCAPING ACCESS.



NEW STREAM CROSSING DETAIL

NOT TO SCALE

POINT	AZIMUTH, DIST. TO	POINT	AZIMUTH, DIST. TO	POINT
BEGIN	355°16'04", 12.34'	PC 1	344°04'13", 38.84'	PT 1
PT 1	332°52'22", 31.06'	PC 2	323°05'08", 23.05'	PT 2
PT 2	316°28'00", 42.56'	PC 3	324°00'46", 26.27'	PT 3
PT 3	331°29'50", 19.82'	PC 4	345°26'01", 12.04'	PT 4
PT 4	359°22'11", 23.14'	PC 5	15°48'22", 14.15'	PT 5
PT 5	32°14'33", 16.82'	PC 6	41°37'03", 9.77'	PT 6
PT 6	50°59'33", 24.75'	PC 7	54°46'37", 5.94'	PT 7
PT 7	58°33'41", 36.50'	PC 8	52°15'53", 32.90'	PT 8
PT 8	45°58'04", 33.71'	PC 9	23°22'20", 57.63'	PT 9
PT 9	0°46'37", 8.95'	PC 10	347°32'57", 27.46'	PT 10
PT 10	334°19'17", 64.10'	PC 11	349°00'02", 38.87'	PT 11
PT 11	5°41'40", 32.39'	PC 12	12°06'24", 10.61'	PT 12
PT 12	14°02'59", 27.25'	PC 13	349°54'05", 49.09'	PT 13
PT 13	325°45'12", 2.64'	PC 14	358°45'46", 43.58'	PT 14
PT 14	31°46'20", 11.26'	END		



SILT FENCE DETAIL

1' 0 1' 2'

SCALE: 3/4"=1'-0"

NOTES:

1. THE EXISTING ROCK BERM SHALL REMAIN IN PLACE FROM START OF WORK UNTIL NEW STREAM BED RIP-RAP HAS BEEN PLACED AND EROSION CONTROL MATTING HAS BEEN PLACED ON ALL GRADED AREAS. INSTALL FRENCH DRAIN UNDER EXISTING ROCK BERM.
2. GRADING SHALL BE PERFORMED SUCH THAT THE EXISTING ROCK BERM IS NOT COVERED OR AFFECTED. THE EXISTING ROCK BERM CAN BE REMOVED ONLY AFTER WORK HAS PROGRESSED AS FAR AS POSSIBLE WITHOUT AFFECT TO THE EXISTING ROCK BERM. SEE NOTE 3.
3. AFTER NEW STREAM BED RIP-RAP HAS BEEN PLACED AND EROSION CONTROL MATTING HAS BEEN PLACED ON ALL GRADED AREAS, REMOVE THE EXISTING ROCK BERM, FINISH GRADING ACTIVITIES, AND PLACE EROSION CONTROL FABRIC IN THIS GRADED BERM AREA. REMOVE THE FRENCH DRAIN AT THE SAME TIME THAT THE EXISTING ROCK BERM IS REMOVED.
4. REFER TO SHEETS C-6 AND C-7 FOR PROFILES AND CROSS SECTIONS ALONG GULCH CENTERLINE.
5. REFER TO PLANTING PLANS, SHEET L-1.
6. GRADING WORK SHALL ONLY BE PERFORMED ON DRY (NON-RAINING) DAYS.
7. REFER TO SHEET C-12 FOR PERMANENT CHANNEL EROSION CONTROL WITHIN THE 50-YR FLOOD PLAIN LIMITS AND LOW FLOW CHANNEL SECTION.
8. CONTRACTOR WILL BE ALLOWED TO HAUL ROCKS & DEBRIS FROM EXISTING ROCK BERM DECONSTRUCTION ALONG DESIGNATED HAUL/ACCESS ROUTES INDICATED ON THE PLANS AND UP THE GULCH 2 TRAIL, ONLY AFTER ALL GRADED (EXPOSED) AREAS ARE COVERED WITH EITHER RIP-RAP OR EROSION CONTROL FABRIC AND PRIOR TO TRAIL REVEGETATION. THE HAUL/ACCESS ROUTE THROUGH THE CONSTRUCTION PHASE 1 AREA MUST BE COVERED WITH EROSION CONTROL FABRIC, BUT NOT COVERED WITH GRASS OR PLANTING UNTIL ALL GRADING AND BERM DECONSTRUCTION ACTIVITIES ARE COMPLETED. IT IS INTENDED THAT THE REMOVAL OF ROCKS SHALL NOT DAMAGE IN-PLACE FOLIAGE; HOWEVER, ANY DAMAGED FOLIAGE (PLANTS) SHALL BE REPLACED.
9. THE CONTRACTOR SHALL MAINTAIN THE EROSION CONTROL STRUCTURES UNTIL STABILIZATION HAS OCCURRED (EXCEPT WHERE STRUCTURES ARE SCHEDULED FOR REMOVAL). BEFORE FINAL PROJECT ACCEPTANCE, THE CONTRACTOR SHALL REPAIR EROSION CONTROL STRUCTURES THAT ARE TO REMAIN AFTER STABILIZATION TO THEIR ORIGINAL CONDITIONS.
10. AFTER GRADING IS COMPLETED IN EACH CONSTRUCTION PHASE, APPLY NORTH AMERICAN GREEN C125 EROSION CONTROL MATTING (OR APPROVED EQUAL) TO ALL GRADED AREAS.
11. BERM DECONSTRUCTION SHALL BE CAREFULLY DONE TO PREVENT DEBRIS AND SOIL FROM ENTERING STATE WATERS. FOR THE PORTION SITUATED OVER STATE WATERS, MANUAL REMOVAL OF ROCKS SHALL BE CONSIDERED. ROCKS FROM BERM DECONSTRUCTION SHALL BE EITHER PLACED IN THE DESIGNATED STOCKPILE AREAS OR REMOVED FROM THE PROPERTY.

Rev	Date	Description	Eng	App
		CONSENT DECREE VERSION: DECEMBER 16, 2005		
		REV. DECEMBER 16, 2005		
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		REV. MARCH 23, 2005		
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PILA'A 400
REMEDIATION PLAN - PACKAGE 2

GRADING PLAN FOR GULCH 2

Designed By: C.K.L. Drawn By: C.K.L., G.Y.
Project No. 2004.33.1900 Date: MARCH, 2004

Approved By:

Date

Date

Date

FILE	POCKET	FOLDER	NO.

Thu, 15 Dec 2005 — 1:07pm
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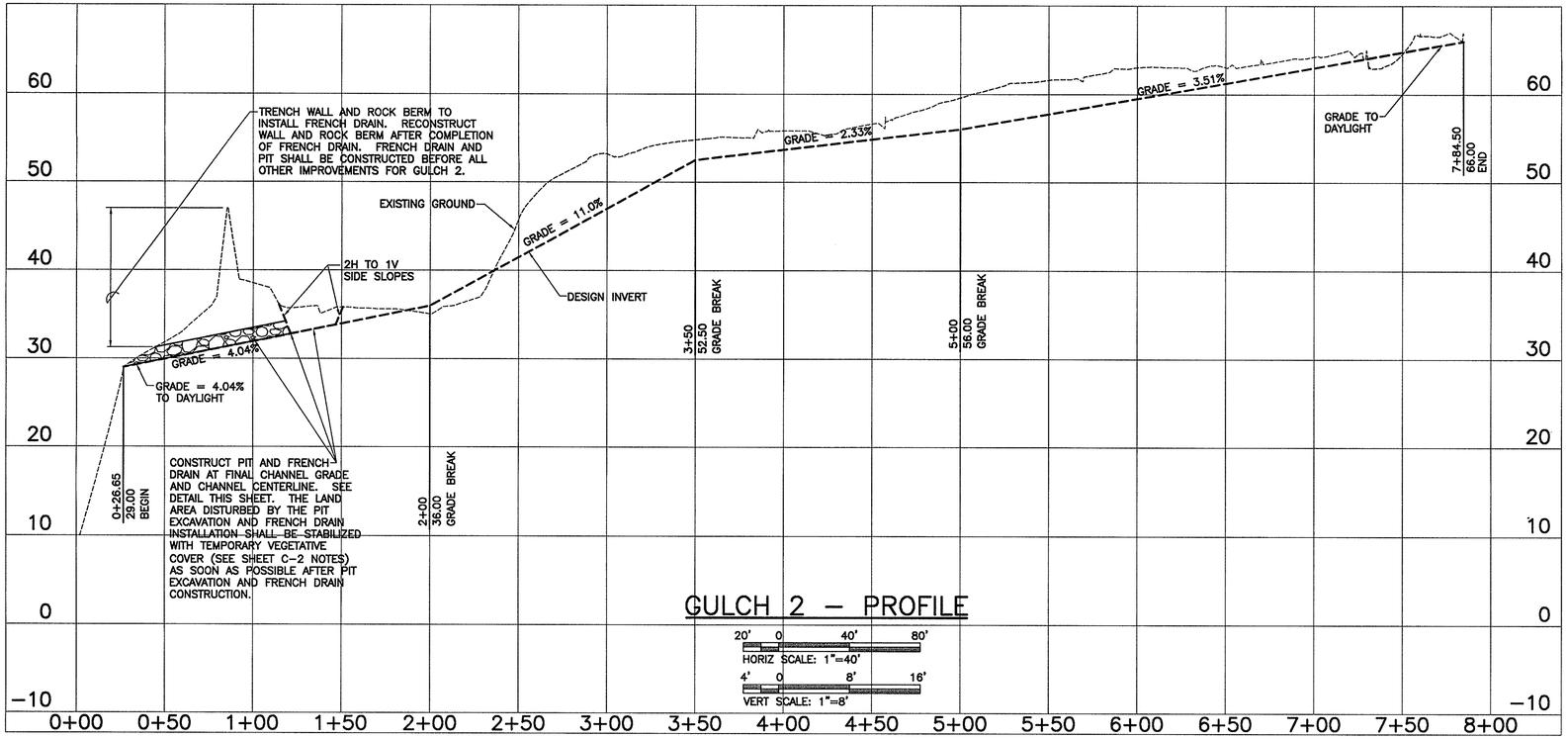
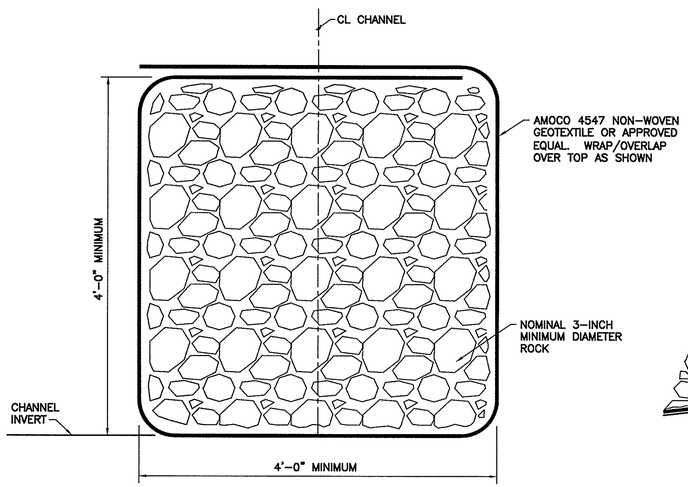
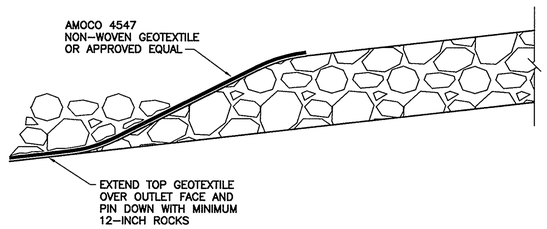


GULCH 2 – PROFILE

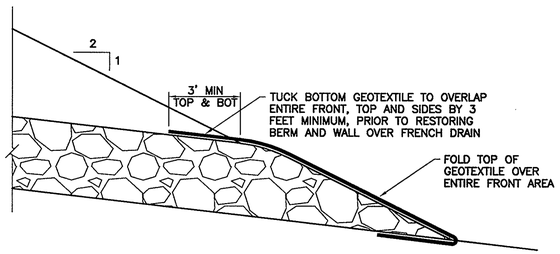
NOTE:
FOR TYPICAL SECTION IMPROVEMENTS, REFER TO SHEET C-12.



FRENCH DRAIN CROSS SECTION
NOT TO SCALE



FRENCH DRAIN OUTLET
NOT TO SCALE



FRENCH DRAIN INLET ELEVATION AT PIT
NOT TO SCALE

Rev	Date	Description	Eng	App
△				
△		CONSENT DECREE VERSION: DECEMBER 16, 2005		
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PILA'A 400
REMEDIATION PLAN - PACKAGE 2

GULCH 2
PROFILE

Designed By: C.K.L. Drawn By: C.K.L., G.Y.
Project No. 2004.33.1900 Date: MARCH, 2004

Approved By:

Date

Date

Date

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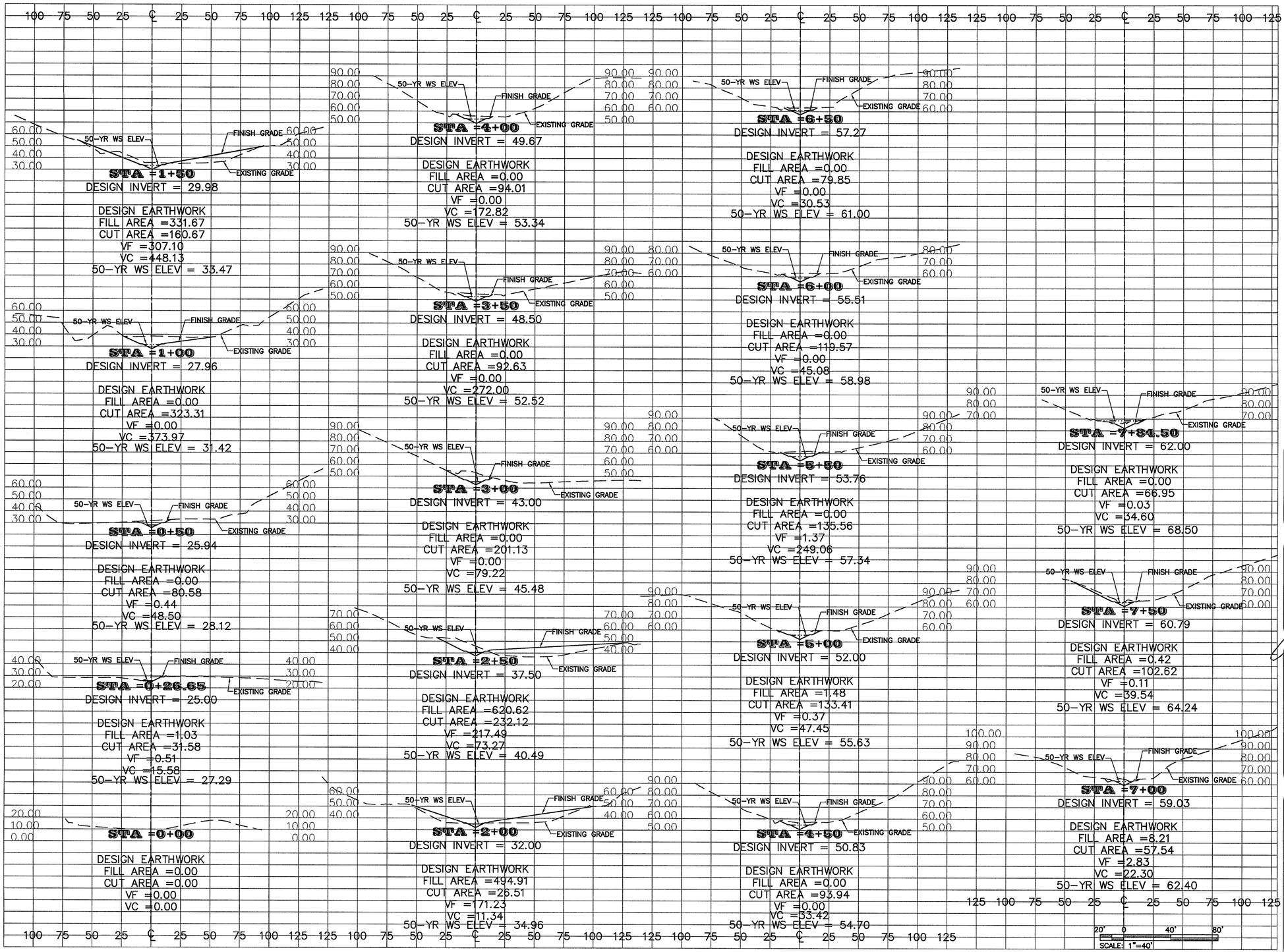

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PILA'A 400
REMEDIATION PLAN - PACKAGE 2

GULCH 2
CROSS SECTIONS

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